DOCUMENT RESUME

ED 203 053 CE 029 100

TITLE Vocational Education in West Germany.
INSTITUTION Alberta Dept. of Education, Edmonton. Planning and Research Branch.
PUB DATE 6 Feb 81
NOTE 84p.: Not available in paper copy due to light print.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Disabilities: *Educational History: Elementary Secondary Education: *Financial Support: *Government School Relationship: Interviews: *Job Training: Observation: Postsecondary Education: *Vocational Education
IDENTIFIERS *West Germany

ABSTRACT

This report describes vocational education in West Germany from a Canadian viewpoint. Chapter 1 discusses education in the Federal Republic of Germany since 1949, including findings and governmental agencies/departments. A resume of the school system is provided in chapter 2. It covers kindergarten and preschool facilities, primary school, three secondary school options, the comprehensive school, and schools for the handicapped. Chapter 3 is a closer look at vocational schools--year of basic vocational training, part-time and full-time schools, higher commercial school, vocational extension schools, technical secondary schools, vocational gymnasium, and technical school. The discusson of vocational training outside the schools in chapter 4 focuses on its history, training places and personnel, trainee placement, training contracts, examinations, and qualifications upon completion. Summaries of interviews, school visits, and factory visitations compose the second third of this report. Appendixes, comprising the final third, include the educational structure in the Federal Republic, contents of curriculums for teacher training, sample schedules for schools/courses, and a summary outline on vocational education in West Germany by Winfried E. Gass, Vice Principal of the Baden School for Painters, Decorators, and Car Sprayers. (YLB)

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Vocational Education in West Germany

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VOCATIONAL EDUCATION IN WEST GERMANY

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Completion Date: Feb. 6, 1981

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1. Education in the Federal Republic of Germany since 1949.

1.1 Federal Republic of Germany-West Germany.

The Federal Republic of Germany and West Berlin consists of the ten states of Baden-Württemberg, Bavaria, Bremen, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia, Rhineland Palatinate, Saarland, Schleswig-Holstein. Bremen and Hamburg are city states.

The total population of the Federal Republic rose from 46.5 million in 1946 to 62.1 million in 1973. The present population is 65 million including 4 million foreigners. The great increase in births in the 50's and 60's, rising to over a million a year, is of great significance for expansion of the education system. After 1964, the level began to decline, at first slowly, and then fairly rapidly. The lowest annual birthrate, 576,000, was reached in 1978. A slight increase in the birthrate is expected in the next few years.

1.2 Ministry of Culture (Kultus).

When the Federal Republic of Germany was established in 1949, education remained the responsibility of the Länder. The federal authorities were not accorded jurisdiction in the education sphere within the Basic Law. There were several decisive reasons for this, the primary one being to avoid centralization, which had led to enforced ideological power formation in education under Nazi rule from 1934-1945, by means of the Reich's Ministry of Education. Further, there already existed consitutions since 1947 for the Länder inclusive of education; as well, German tradition preferred independent jurisdiction for the states.

The Ministry of Culture is the highest educational authority in the individual land. It is responsible for the

administration of the school systems. Authority is delegated to the district government and the municipal and community level. In the city states, district government is omitted. The curriculum of the various schools is determined by the Ministry of Culture of the particular Land. Curriculum is developed with the participation of the teachers and of experts. Guidelines or framework are established by the Standing Conference of Ministers of Education.

1.3 Funding of Education.

Education is available at no cost to the student. There is no school tax, and property tax is minimal. The Lander get a proportion of the Federal income tax based on a wealth equalization factor. Taxes are generated locally through a Business and Industry Tax, rates of which are set by the Federal government. Teachers are employees of the Land and are civil servants after successful practice-teaching for a period of 18 months and up to three years for technical schools. Teachers are paid during this training period. Buildings are erected at the expense of the Land, and maintained by the local authorities. However, financing of exceptional equipping of buildings and additions not in the basic design are the responsibility of the local community.

1.4 Standing Conference of Education Ministers (KMK).

The fundamental rights of freedom of movement and free choice of profession within the Federal Republic of Germany, guaranteed to all citizens by the Basic Law, oblige the Länder to practise constant collaboration and coordination. In 1948, with this in mind, they set up the "Standing Conference of Education Ministers", with a secretariat in Bonn. The Secretariat assists in the preparation of consultation and cooperation among Länder Ministers of Culture. Resolutions and recommendations by the Conference demand unanimity among

the Ministers of Culture in all ten Länder. Conference resolutions constitute recommendations to the Länder which only become legally binding when they are promulgated in the form of state law, decrees and regulations. Such resolutions would be concerned with the fundamental structures of the education systems in the various Länder and would include:

(a) length of compulsory education,

(b) beginning and end of the school year,

(c) length of vacations,

(d) designations of various educational institutions,

(e) essential elements of curriculum and their standardization,

(f) leaving certificates.

The Secretariat is also responsible for the educational exchange service which deals with foreign exchanges for teachers and students. Further, the Secretariat is responsible for the Office of Education Abroad, which issues evaluations of the equivalency of foreign qualifications at school and at university.

1.5 Federal Ministry of Education and Science.

The Federal Ministry of Education and Science powers extend over the following areas:

(a) concurrent legislation-university and vocational education,

(b) non-school vocational training and further training,

(c) regulation of training assistance for pupils and trainees,

(d) assistance for scholarly research,

(e) regulation of pay and welfare for public service employees, inclusive of teachers and university lecturers,

(f) outline legislation-general principles for the university system,

(g) joint functions-university expansion and building,

inclusive of university clinics (hospitals).

1.4 Federal Government/Federal State Commission for Educational Planning.

According to the Basic Law, both the Bund and the Länder can collaborate in the field of educational planning. As a consequence, Bund and Länder set up a joint "Federal Government/Federal State Commission for Educational Planning", to which all responsible ministers belong. This body approved an initial "Overall Education Plan" in 1973. This contains a framework plan for the further development of the whole of the education system to the year 1985, and sets out estimated financial requirements in an "education budget". During the intervening period, it has emerged that the Overall Education Plan has been recognized by both the Bund and the Länder as the point of reference for education policy activity, even if many developments, particularly in the school's area, have taken a different course from that originally planned. The Overall Plan has further helped to overcome acute distress in individual areas and to promote innovations.

2. Resumé of the West German School System.

2.1 Compulsory School Attendance.

All children must attend school following their sixth birthday for a minimum period of nine years--now ten years in the case of three Länder. Anyone not wishing to attend a further school after this time, preferring to start a training course or a job, is obligated to attend a vocational school two or three days a week for a further three years. In effect, compulsory school attendance continues to age 18 or 19.

2.2 Kindergarten and Pre-school Facilities.

These facilities cater to children age three to five or six years. The current facilities number some 25,000 and provide almost 1.5 million places, have both public (local authorities) and private (e.g., church) governing bodies. Pre-school education is the financial responsibility of the parents--approximately 50DM per month.

2.3 Primary School (Grundschule).

The general primary school level for all pupils is the Grundschule. It provides the first four years of schooling (in Bremen, Hamburg and West Berlin, the first six). This school provides young children with the necessary foundation for secondary education, with the greatest possible attention being paid to the particular skills and interests of the individual student.

2.4 Secondary Option I Hauptschule.

The Hauptschule covers fifth year (grade) to the ninth year and, in some cases, a tenth year. The objective of this school is to equip pupils to continue their educational career in Secondary Option II within the framework of vocational and general education courses. One of the principal responsibilities

of the Hauptschule is to provide young persons with an introduction to the professional and working world. This objective is pursued by means of the teaching area known as Work/Economy/Technology. In several Lander, instruction is concerned directly with choice of vocation. (Vocational Guidance is the Alberta term.)

The importance of the Hauptschule has been diminishing in recent years. Whereas seven out of ten 13-year olds were attending Hauptschule in 1960, this figure has dropped to four out of ten by 1978. This is also linked with the fact that the less able pupils are in the majority in the Hauptschule; further, the number of foreign pupils at Hauptschule, at least in certain areas, particularly urban districts, is growing rapidly.

2.5 Secondary Option II Realschule.

Realschule covers classes/grades five to ten. Here as well, there is a special program consisting of three grades for Hauptschule students who do not wish to transfer until after the seventh year.

The object of the Realschule is to provide the prerequisites for various vocational and study-qualifying education courses. The teaching programme at Realschule differs from Hauptschule through a broader curriculum in foreign languages (two foreign languages, one of which is compulsory), as well as an intensification of systematic approach to subjects.

2.6 Secondary Option III Gymnasium.

A typical Gymnasium provides education for classes/grades 5 to 13, or 7 to 13, depending on the length of Grundschule. There are also the so-called continuation forms of Gymnasium, accepting Hauptschule pupils after class/grade 7, as well as those for gifted leavers from Realschule and vocational schools.

The traditional types of Gymnasium are those with a

modern language bias, those with a mathematics-natural science bias, and those with a classics bias. There are, in addition, social-scientific, economic, technical, liberal arts, agricultural, domestic science, and handicraft Gymnasium.

2.7 The Comprehensive School (Gesamtschule).

This school, which offers the education courses offered by the three different school types (2.4, 2.5, 2.6) plus their qualification objectives and final certificates, was introduced in the 60's. In three of the Länder, the Gesamtschule enjoys equal status with the other school forms; in the other Lander, it is still being treated as a school experiment.

2.8 Sonderschule.

This is a special school for the education and training of children and young persons with physical or mental handicaps. 1981 is the Year of the Handicapped; the German press has had news stories of the pros and cons of integrating such students in regular schools.

3. Vocational Schools.

Vocational school refers to a school especially on a secondary level that trains persons with special aptitudes for qualifications in specific trades or occupations. Vocational training includes the extended vocational education and training and re-education and re-training. It must provide a wide spectrum of perception and wide knowledge including theory and practice.

Vocational schooling is part of the secondary school system. The significance of vocational schooling is underlined by the fact that the vast majority of young people between the ages of 15-19 make use of the facilities provided. The highly differentiated system is organized in a multiplicity of types of schools and specializations. They include the following:

(a) part-time vocational school,

(b) full-time vocational school,

(c) vocational extension school,

(d) Technical secondary school,

(e) Vocational gymnasium,

(f) Technical school.

The educational goals of the vocational schools have been carefully formulated. They include:

(a) vocational skills and knowledge acquired and planned are to be extended,

(b) one's concept of one's own vocation is to be elucidated and the way paved for the understanding of the position of one's occupation within the context of the modern world of work,

(c) the vocational school is to set itself the task of leading the student to reflection upon the nature of man in his own self, and, following from this, the opportunity to

clarify and stabilize the young person's character.

3.1 Year of Basic Vocational Training-Berufsgrundschule.

This program initiated by the State Commission for Educational Planning is the first step in basic training which can either be completed at full-time schools or within the dual system (school and on-the-job training). This basic year of training will cover theoretical and practical aspects of employment as a whole.

Purpose: intended to limit unemployment among young people and to serve as the first step in basic training.

The entrance requirements are as follows:

(a) must have completed at least class 8 at the Hauptschule,

(b) must have met requirements of full-time schooling-age 15.

Program:

(a) commerce and administration,

(b) metal industry,

(c) food and home economics.

Completion: viewed as equivalent to completion of the first secondary option--Hauptschule.

3.2 Part-time Vocational School.

Entrance Requirements: must have completed full-time schooling at secondary option I--Hauptschule. Note: compulsory for those who have completed Hauptschule and are either receiving initial on-the-job training, or have a job as a labourer.

Program: up to 12 hours of lessons at school every week plus training in firms or the job. Of the formal instruction, 60% takes into account the individual requirements of different jobs; 40% covers general subjects such as German, community studies, sociology, economics, religion, and physical education.

Completion: no special examination; leavers receive a

certificate which, in conjunction with the report on successful conclusion of vocational training, permits entry to a technical school or full-time employment. Completion is viewed as being equivalent to finishing Hauptschule for students who previously failed to do so.

Length of course: usually 3 years, up to age 18.

3.3 Full-time Vocational School-Berufsfachschule.

Various institutions are collected under the designation of full-time school, differing with regard to conditions of admission, extent, objective and length of training.

Entrance requirements: either completion of Hauptschule or Realschule, depending on what the type of school involved set out to do.

Program: provides more extended general education as well as basic vocational training of a specific nature, e.g. commerce.

Completion: attendance at such a school is partially accredited to the time of apprenticeship. The terminal qualifications, equivalent to that of Realschule, enable attendance at a technical Secondary school or higher commercial school, or a job demanding completion of Realschule.

Length of course: one to three years.

3.4 Higher Commercial School.

Entrance requirements: completion of Realschule.

Program: commercial subjects as well as general subjects such as German, etc.

Completion: after one year of practical on-the-job training, the student may be admitted to a polytechnic or qualify for full-time employment if he/she is eighteen.

3.5 Vocational Extension Schools.

Entrance requirements: have completed one year of training or must be undergoing vocational training.

Program: various specializations, e.g. commercial, technical, industrial, home economics, social work, agriculture. The general program includes German, a foreign language, usually English, history and community studies, mathematics and science.

Length of course: length of courses vary; instruction in the full-time courses extend over two or three half-years. In its part-time form, there are ten to twelve lessons a week for six or seven half-years. There are also special forms that start as full-time and end as part-time. A course lasts at least 1300 hours.

Completion: qualified for advanced positions that require completion of Realschule. Students are also qualified for further study at technical secondary schools, advanced technical schools or colleges.

3.6 Technical Secondary Schools-Fachoberschule.

Purpose: to provide general and more job-orientated theoretical and practical knowledge and skills.

Entrance requirements: completion of Realschule or the equivalent.

Program: comprises classes/grades 11 and 12.

First year: 11th grade- practical training extends over at least four hours a week. Up to half such training can be given in either the firm's or the school's own training workshop. Additional practical training takes place in firms. As well as practical training, there are at least eight hours of formal instruction per week.

Second year: there are thirty compulsory lessons per

week in general and specialized subjects. General subjects include German, social studies, math, science, a foreign language, and physical education. Specializations include engineering, industry administration, home economics, social work, design, and navigation.

Completion: qualified for entrance to polytechnic or college.

3.7 Vocational Gymnasium.

Entrance requirements: completion of Realschule or the equivalent.

Program: specializations include commercial, career economics, technical science, agriculture, and forestry. The program includes general courses as well, including German, math, etc.

Length of program: 3 years covering the 11th, 12th, and 13th classes/grades.

Completion: may lead to either general or very strict qualifications for university entrance.

3.8 Technical School.

Entrance requirements: completion of basic training year, or job experience, or completion of Hauptschule and, in some instances, Realschule or the equivalent.

Program: full-time or evening courses related to the trade. Technical schools exist for almost all vocational spheres.

4. Vocational Training Outside the Schools.

4.1 History.

In the 50's and early 60's, vocational training was an end in itself. The student left school at age 15, underwent three years apprentice training with a master craftsman, received his journeyman papers, and generally stayed in the firm. Under this system, there was a discrepancy between the highly technologically trained person and the person trained in a very small firm. The small firm was satisfied with the system because it wanted reliable people trained for the firm.

During the late 60's, there was an economic recession in Germany and, as a result, many small businesses failed. Young people who had been trained in such firms, in seeking other employment, found themselves undertrained and needed re-training to qualify for other available jobs. It was discovered these people lacked many basic concepts to be employed.

This situation prompted some action on the part of the government. While education is a Land responsibility, the federal government saw its role. In order for the federal government to act, the Basic Law had to be changed. Such a change required a two-thirds majority in the Bund. At this time, industry and political parties saw a need to do something for economic survival. Germany's most valuable resource has always been highly trained manpower. The so called "Grand Coalition" in 1967, consisting of the two opposing political parties, CDU and SPD, merged for a period of four years, holding an 80% majority of seats in the Federal House of Representatives. Thus the Vocational Training Act of 1969 was passed. It was agreed in coalition discussion that education per se would not be an issue of discussion, as this would have been opposed by all ten

Länder; but it was agreed that practical on-the-job training would become a matter of Federal concern. Thus the Dual system- school plus industry- was established, providing the country with a viable vocational training program open to changes and amendments at Land level. A second Vocational Training Act was passed in 1976. The main objective of this act was to counter unemployment among young people, and to assure necessary training places for the younger generation.

The Federal State Commission for Educational Planning and Promotion of Research recently decided on a program for implementation of urgent measures of a reduction of employment risks for young people. This priority program extends up to 1982, and provides for:

(a) accelerated implementation of the year of basic vocational training and establishment of courses opening up training to young people who did not complete Secondary School Option I Hauptschule,

(b) increased availability of training places and firms,

(c) expansion of local workshop centers where young people receiving training in small or very specialized firms can get extra assistance,

(d) expansion improvement of part-time vocational schools,

(e) expansion of full-time vocational schools.

This program envisages the creation of some 20,000 additional positions for teachers and trainers. Co-ordination of training in firms and schools is necessary in the dual system, and the Federal Government and the Ministers of Culture from the states reached an agreement in 1972 on a procedure for harmonizing regulations and courses. This harmonization is directed by a co-ordinating committee consisting of officials from the Federal

Ministry of Education and Science and other Federal ministries responsible for individual spheres of training, and from the Ministries of Culture in all the states. The training regulations are drawn up by groups of experts co-opted by the Federal Ministry of Education and Science in conjunction with the other Federal ministries involved. The outlined curricula for teaching at vocational schools are developed by working parties appointed by the Conference of Ministers of Education.

4.2 Organization of Industry.

Industry in West Germany has its own special organizations, whose roots can be traced back to the early Guilds. Such organizations are known as Chambers. The Chambers are self-regulatory bodies, membership in which is mandatory for all commercial enterprises. Their functions are related to the group they represent, but they also perform functions on behalf of the government, as, for instance, in the area of vocational training. These Chambers lay down training rules for trainees in the various trades. As well, they are involved in the examination of trainees; a Chamber representative is on the Examination Board. There are vocational training centers sponsored by various Chambers.

Chambers are organized on various levels; district organizations followed by Land associations and at the top in Bonn, there is the Central Association of German Craftsmen, representing the whole field of Industry. The Chambers include:

(a) Chamber of Industry and Commerce: responsible for seventy-three different vocations, e.g. banking industry, tool makers, and such associated trades as cooks, chefs, waiters, gas station attendants, florists,

(b) Chamber of Agriculture: associated agriculture and

home economics training, e.g. veterinary assistant,

(c) Chamber of Law: all legal assistants,

(d) Chamber of Patents and Research,

(e) Chamber of Accountants and Finance,

(f) Chamber of Medicine: medical assistants.

In general, various Chambers provide support service to professionals. All other areas would be under the Chamber of Industry and Commerce, except the Federal Government civil service who train their own support staff.

4.3 Trade Unions.

Membership in a union is not mandatory. The various unions do much to encourage workers to belong. In most instances, non-union members have supported action taken by a union. A trainee in a firm may seek the support of a union if he/she wishes. Trade unions are represented on the Examination Boards.

4.4 Places of Training.

The Vocational Training Act names the main criteria an enterprise must meet in order to qualify as a place of training. The Act specifies the openings for which trainees can be accepted, the equipment that must be available for training and the number of trainees that may be accommodated. The big industrial concerns maintain special workshops for training purposes. Here their trainees are systematically familiarized by trained instructors with all the operations of what is to be their work in the future. More than half the trainees get their training in smaller workshops with not more than fifty employees. Such shops are too specialized to be able to provide all-round instruction. For that reason, since 1973, separate training centers have been established in which trainees are able to widen their understanding of their trade or occupation. These

training centers are sponsored by various employer's associations--Chambers.

4.5 Training Personnel.

To qualify as a trainer, an individual must meet certain requirements as specified in the Vocational Training Act:

(a) must have completed his/her training (master level),

(b) must have pertinent work experience,

(c) must be at least 24 years of age,

(d) must be a morally acceptable person--no criminal offense record,

(e) must attend pedagogical seminars (a trainer has usually attended, at the industry's expense, one or two seminars, which would deal with the mechanics of teaching--didactics, methodology, psychology. This pedagogical requirement varies in different Lander.),

(f) must have a certain amount of theoretical knowledge connected with employer-employee relationships.

He then must be selected by management in the firm.

The trainer must always be present in the firm when trainees are there. All materials used by the trainee must be supplied free of charge by the firm.

4.6 Placement of Trainees.

Upon the completion of Hauptschule, usually at age 15, a student may select vocational training outside the school. Up to the age of eighteen, his training will come under the dual system; he will train with a firm and also attend classes at vocational school. The length of time or hours at school will be in part determined by the trade he has selected.

The student is made aware of various occupational choices in several ways. A teaching area in the last year of Hauptschule,

known as Work/Economy/ Technology, serves to acquaint him/her with the various vocations, as well as some insight into the working world. As well, various employment opportunities with on-the-job training are advertised by industries in the school.

The home room teacher, who has usually been with the student the last two years, may play a significant role in guiding the student in his/her choice of vocation. The Department of Labour has trained personnel, thoroughly familiar with the various trades, who visit the schools to assist students in making their choice. All trades are open to both sexes.

The student, then, with help from the school and his/her parents, makes a selection. The student then arranges to be interviewed by the employer. The employer has to be satisfied the student is one who will fit his industry.

4.7 Contracts for Vocational Training.

Contracts, in accordance with the Vocational Training Act, are a private, legal, binding agreement between trainee and employer (firm). No one under age fifteen may sign such a contract, and a parent or guardian must counter-sign the contract. Salaries for trainees are regulated by a Union contract. Trainees may or may not join a Union; benefits apply in both cases. The training period usually lasts three years; the first year pay is considered pocket money (400-450DM--about $250) per month, second and third year pay may be as high as 800DM per month. Usually by the third year, the trainee is a productive member of the firm. The trainees are protected by Federal Health and Family laws, for example, no night work or week-end shifts; twice annually the trainee has a medical check-up, a copy of which goes to the Land Health Office. All work done by the trainee must relate to the training; work shall

not exceed his/her physical capabilities, and the trainee must not be overtrained in one aspect of the chosen trade. The trainee must have at least 25 working days vacation.

The trainee can take a route of complaint, if dissatisfied with his training, to the Chamber concerned; if he/she is still not satisfied, he/she may take his/her complaint to the local Social Office. A contract is binding to both parties after three months.

The trainee must be allowed time to visit other firms and, of course, time to attend classes at a vocational school or anywhere else he must go for training.

The school, the employer (firm), and the appropriate Chamber keep an account of the student's attendance.

4.8 Responsibilities of the Trainee.

The trainee must follow instructions of the trainer, respect his/her co-workers, and be co-operative, including all in-firm regulations, e.g. no smoking rules. The trainee is expected to maintain ethical confidentiality of what he/she learns. The trainee is expected to follow work rules of the firm (time schedules, etc.) and must attend all school sessions as required.

4.9 Reasons for Terminating Contract.

(a) By the trainee.

i. inappropriate training for that person,

ii. trainee neglected because of absence of trainer,

iii. imprompt payment of salary,

iv. physical punishment used by the trainer,

v. moving of parents and no appropriate place for trainee to live.

(b) By the firm.

i. trainee is unco-operative, disobedient,

ii. trainee is unwilling to learn,

iii. trainee is tardy,

iv. trainee is dishonest,

v. trainee refuses to have medical examination,

vi. trainee is absent from the vocational school, does not attend the required classes.

Two warnings in writing must be given to the trainee prior to dismissal. The trainee may appeal to the appropriate Chamber or to the Social Service Office.

4.10 Examinations.

On completion of training for a recognized vocation, the trainee must take a final examination. For the trades, these examinations are administered by the appropriate Chamber. In accordance with the Vocational Training Act, at least one intermediate examination must be administered during the course of training to determine the trainee's level of proficiency.

The examining Board must include an equal number of representatives from the Employers' Associations (Chambers) and the Unions, as well as at least one teacher at a Vocational School.

The examination consists of:

(a) a practical demonstration of skills (drawn by lottery),

(b) an oral portion, and

(c) a written portion.

The candidate must receive a mark of satisfaction or above in each portion of the examination. The candidate is issued a certificate showing the results of the examination. The

examination may be repeated twice.

4.11 Qualifications Upon Completion.

Successful completion of vocational training is a prerequisite to employment as a journeyman, helper or skilled worker at the standard rate. It is also a prerequisite for qualification as a master after 3-5 years of working experience and successful completion of the appropriate examination. It is a prerequisite to admission to certain vocational schools, as well as to higher education. Most trainees, upon successful completion of their training, are employed by the firm in which they trained, providing there are positions open.

4.12 Provisions for Failures in the Program.

The trainee may take the final examination a second time, or he/she may select another trade and begin training again with the same or another firm. The trainee may choose to become a labourer with no specific trade.

Vocational Guidance in West German Schools: Role of Labour Office.

Interview: with Mr. Steipp, Regional Director at the Ortenau District Labour Office in Offenburg. Mr. U. Schweneke acted as interpreter.

Training of Labour Office Guidance Personnel.

The Labour Office is a function of the Federal Government. District offices are established in conjunction with county boundaries. In the county of Ortenau, the district office is in Offenburg and there are five sub-offices, including one in Lahr.

Candidates who wish to pursue a career in Vocational Guidance with a Labour Office must:

(a) be graduates of a gymnasium,

(b) have practical experience in a vocation, generally a professional one with vocational training, e.g. architect, engineer.

Formal training centers are established throughout Germany; for the district of Ortenau, such centers are located at Nuremberg and Mannheim. Such training centers, Fachhochschule, would be at a level just below university. The course of studies consists of three years of training, the third year in on-the-job training in a Labour office. Courses of instruction would include a wide study of various vocational fields, as well as psychology, didactics, and related academic subjects. The candidate receives a full salary while training and is entitled to normal holiday time. The candidate, upon successful completion of training, is qualified to handle vocational guidance up to Grade X Realschule, or Grade X Gymnasium.

A candidate, who is a university graduate, after one year of Vocational Education Training is qualified to work with

students beyond Grade X, as well as with university students.

In a Labour office, along with the two previously mentioned types of qualified personnel, there is a third person with special qualifications. This individual, who must have a Master Craftsman's certificate and one year of special vocational education, looks after apprenticeship contracts. This individual with his special background works closely with industry as well. For example, he/she will visit industries in the area and be thoroughly familiar with their needs. He/she does much to encourage industries to accept trainees.

The district office in Offenburg has thirteen people qualified to provide vocational guidance up to Grade X, four above Grade X, and two who are in charge of apprenticeship contracts. The sub-office in Lahr has a smaller number of employees with the three categories represented. There are over 7000 young people in the county of Ortenau who may use the services of the Labour Office. All students receive group guidance at school, and approximately 2/3 of those entitled to do so, come to the Labour Office for individual guidance.

Responsibilities of Guidance Personnel in the Labour Office.

1. Group Guidance.

The Labour Office provides government publications and self-testing materials to the schools and students for group guidance. The objective is to determine a student's particular interest and to provide him/her with information in his/her field of interest. Since the Labour Office is a department of the Federal government and education is a Land responsibility, introduction of these materials varies considerably. In the Land of Baden-Wurttemberg, the teacher assigned to do so,

usually the home room teacher, must work through some of the material with the students. This is not a requirement in Bavaria. Psychologists are not enthusiastic about the method because they feel students recognize information as a test of themselves, and that students lack the skills to interpret the "indicators".

The schools in Baden-Wurttemberg are required to give at least 42 hours of group guidance, and the Labour Office personnel come in for at least 4 hours of group sessions. In these sessions, students are acquainted with the extended services for individual guidance which the Labour Office will provide.

In September, representatives from the Labour Office go to every school to discuss the guidance program. Booklets which contain a list of vocations and professions briefly described are distributed. Each student may fill out a card requesting more information on any three vocations or professions. Three such requests are free, for a number beyond this there is a small fee. The short descriptions of the various vocations in the main are objective but some may be recognized as manipulative.

The entire "hand out" program of vocational guidance includes a Teacher's Guide, which should assist the teachers in outlining the available vocations. Included with this, is a catalog of vocational films that are available to the schools. There are special pamphlets for Sonderschule. In the county of Ortenau, there is, as well, a detailed catalog of available vocational schools.

The dissemination and productive usefulness of this material is determined in a large measure by the co-operation of teachers with guidance personnel from the Labour Office. In

some instances, according to Mr. Steipp, consultation between the two groups takes place in a matter of minutes--between bells; in others, much more time is spent. In all instances the Labour Office personnel visit the school twice a year in the second last year of school, and they also hold an evening with the parents of the students. In the final year of school, the emphasis is on individual guidance.

2. Individual Guidance.

The Labour Office guidance personnel offer individual guidance by appointment. An office is usually able to handle six Hauptschule students per day and about seven Realschule students per day. The student usually has to wait about three weeks for an appointment. The counsellor has very little background information on the student as he/she is only asked to bring an academic record from Grade 1 on.

Individual guidance is strictly voluntary; the student must apply for an appointment. He/she may or may not be accompanied by his/her parents. As one might expect, the students who need vocational guidance the most do not appear at the Labour Office.

3. Apprenticeship Positions.

It is the responsibility of Guidance personnel in the Labour Office to maintain a list of all available apprenticeship positions. About 60% of the business places in Ortenau register their positions. This can be explained as maintaining the German tradition of training the young. At the present time, there are more traditionally male positions available than there are trainees; for girls, there is a shortage of places. This is not to say girls are prohibited from entering what one might consider to be male fields, but the desire to do

so has not been demonstrated. Our guest, Mr. Steipp, estimated there are about three thousand positions available in the district; the Labour office fills about one-half of these, and the rest, students find on their own.

4. Contact with Vocational Schools.

Labour Office personnel must be familiar with types and various training programs offered by vocational schools in the district. This is no small task, as our guest suggested very few people fully understand the programs that are available or the qualifications necessary for certain "streams" in vocational schools. The guidance personnel must make students aware of whatever career openings are available to them.

5. Financial Aid to Families.

The Federal government has a detailed program of financial aid to families while their children are receiving training. This information is supplied by the Labour Office. The amount of aid to the family is based on the income of the parents and the number of children in the family. It appears most families are entitled to some allowance if their children are attending vocational school. If the student is over 18, he/she will receive the payment. Trainees will be paid by the firm and, as well, the parents may collect an allowance. Apparently at this point the Labour office in Germany is short billions, and there may have to be adjustments in the above program.

Mr. Steipp indicated Labour Office guidance personnel spend 50% of their time on individual guidance, 20% on group guidance, and 30% collecting vocational material and information in order that all material is current. At the present time, a high priority with Labour Office personnel is building up guidance information

for the handicapped and attempting to solve at times the difficulty of the placement of such students.

Visitation and Interview Session at a Vocational School-
Die Berufschulzentren, Waiblingen, West Germany.

In a three-hour session with the Principals of a large vocational school, we had as an interpreter, the Principal of a Stuttgart Gymnasium, who had arranged the session for us.

The school had 2000 students enrolled in programs in commerce, home economics, and several trades. Each of the three sections has its own administration. The building is new--well-designed and well-equipped for the purposes. For the number of students served, one would immediately question the number of student places, but when you realize all practical experience is given away from the school, it is understandable. In the auto body shop, there is only one chassis, only a few stations in beauty culture, a few demonstration tables in metals, and so on. We questioned the administration at length, as well as some instructors and some students. The school served an area of about 50 square kilometres and there are three such schools in the area which offer different programs. In our discussion we gleaned many generalities about the program and the personnel involved.

The staff is made up of two types of teachers. A vocational teacher must have his/her Abitur, and have received university training leading to a diploma (degree) in his/her specialty, followed by 1½ years teacher training. As well as the highly qualified professional teacher, there are "practical" teachers. A practical teacher has at least completed Realschule (Grade X) and has a Master Craftsman's certificate in his/her trade and at least one year of teacher training. The practical teacher is paid on a lower scale than the professional teacher. The job does attract Master certificate holders because of the

prestige of a blue collar worker and the security of the position.

The school accepts students from Hauptschule, Realschule, Gymnasium, and, in fact, some students with university degrees may attend to acquire a specific trade. We suggested such a wide range of students' backgrounds might create problems in class. The Principals agreed the ingenuity and creativeness of teachers is truly tested.

The Hauptschule graduate attending this school will be there for at least 3 years, as he must be in school, or receiving some training until age 18. The first year is full-time schooling; the second and third year are dual system--school and industry. In the third year, the student may only spend 1½ days at school, with the remainder of his/her time spent in training in industry. The Principals expressed great satisfaction with the dual system. They did admit some problems might arise in the third year when a student would rather not put in 1½ days at school. However, there is close co-operation between industry and the school. Industry almost acts somewhat like a parent of a young child, and notifies the school of the student's attendance and progress at work. The student in his first year with the firm receives a small amount of money. In the second and third year, a trainee in mechanics would receive 900DM (almost 500 dollars) per month.

Industry does co-operate with the school, because they prefer to train their own workers. There is a controversial law which states that fines may be charged to an industry if they do not take trainees. However, the Principal said that, to his knowledge, no such charges had been laid under the law. The more popular trades, for example, electronics, are in great demand and it is possible that a student might not be

able to find a placement. Mercedes Benz, one of the largest industries in Stuttgart, has established an excellent training center in their plant and they prefer to train their own workers. Positions may be hard to get with Mercedes, and it definitely helps if, for example, the father of a student is employed there.

We were interested in information given us regarding employment in Banks. The student takes related subjects at the school--commerce, accounting, perhaps a foreign language, and in the 2nd and 3rd year, works in a Bank as a trainee receiving a salary. This seemed a logical training process, and one that might easily be adopted in Alberta, as every small town has several banks.

Approximately ten per cent of the students fail the final examination and do not receive journeyman papers. The student is then free to select another trade or, if he/she is 18, to become an unskilled labourer. Then, of course, one is faced with a lifetime of perhaps low pay and unsteady employment. School failures, as in Alberta, are a problem. Every possible attempt is made to find some suitable trade. The Principals expressed satisfaction with the vocational guidance counselling done by the Labour Office. They did feel the student was given ample information about the various trades that were open to him/her.

The Principals said there is some problem integrating children of foreign workers into the dual system. It would appear that more German language instruction is needed. This problem is felt particularly in large industrial areas like Stuttgart.

Interview with Grenate--student of the Kaufmännische Berufschule (Training for salespersons); submitted by Alberta teacher, Sharon Gilbertson.

Grenate entered this Berufschule following Hauptschule (Grades 5-9). She was 14 years old when she chose this specific occupation. The training program for salespersons lasts for 2 years. She attends classes on Tuesday (8 hours) and on Thursday morning (5 hours). She apprentices in a local clothing store on Monday, Wednesday, Friday and Saturday. She is on a contract with the company and trains there 24 hours each week.* In total (classes and apprenticeship), she is committed to 37 hours of work per week.

Since she is working in a small shop, she is trained directly by the owner. If she were in a larger store, e.g. KK (similar to Woolco or Woodwards), she would receive training from co-workers. She said it was not necessary for the "boss" to offer all the training or directions. There is a 6-week summer holiday and a 3-week winter holiday taken each year. So basically, the school year is 10 months.

The classes at the Kaufmännische Berufschule cover the following subject areas: Math, German (no second language), Social Sciences, Warenkunde (study of wares or materials), Verkaufskunde (salesmanship), and Betriebswirtschaft (economics). The students have a two-part exam; 1) practical--a teacher comes to observe, and 2) written. More emphasis is placed on the written segment of the exam. A mid-term is written after one year in the school. According to Grenate, there is a very low failure rate. In her present class, there are 27 girls and 3 boys. This is a common ratio in this particular vocation at the present time.

Upon completion of the two-year program, she is not

guaranteed a job. Employment opportunities are advertised in the newspapers. The apprenticeship firm has no obligation to employ the person once the training contract is fulfilled.

Grenate is satisfied with the program and feels that all courses that are required are necessary and worthwhile. She also feels that certification from the Kaufmännische Berufschule will make it much easier for her to get a job.

* The school arranges for the students to be placed in specific businesses. This is not up to the students. Two years are spent with one business.

Note: Most cities have their own Kaufmännische Berufschule. It has not been centralized.

Observations of the German Vocational Training System, submitted by W. T. Marshall, teacher with the Edmonton Public School Board.

The practical test of any system is the evaluation of the final product of that system. Having worked in Germany, and having grown to know a number of German professionals, I was in a unique position. I found myself at a point from which I could examine the German system of Vocational Education through the process of interviewing people who had gained their expertise under the various educational plans outlined previously.

Following in summary form, are the reactions of a few of these qualified people to their schooling. The professionals interviewed included an engineer, now involved in plastics; a student in his first year of engineering school, having come through the Vocational Gymnasium; and a sheet metal specialist, who has subsequently gone into sales with a major tobacco concern. Also included are a number of people encountered in visits to a variety of schools in these areas.

A. In the matter of diversity of opportunity and counselling of students for their proper choice:

In many cases, the family, either a father or an uncle, plays a large role in determining the vocation or occupation of the youngster. This takes both the form of following in the family business as an economic necessity, and of learning the family business simply as a fact of growing up in the rather more traditional German community. After the war, a desperate need for qualified people in practical areas was felt, and this practicality seems to pervade the thoughts until the present time.

These people feel that, although their choices are heavily directed, they have a tremendous opportunity to choose from a wide range of occupations, to be trained and qualified in

these pursuits, and to have success in their areas of specialization.

The counselling that the schools provide seems to be a much more restrictive sort than provided in Alberta, and the school people work very closely with the government agencies involved and with the various trade guilds to determine what sorts of workers will be necessary or useful when the student enters the labour pool. The system of apprenticeship, which is constantly in the minds of anyone discussing such matters, acts as a perfect control mechanism upon the numbers of trained specialists in any given area.

The simple fact of the student seeking out his own apprenticeship limits the number of people admitted to any field and prevents a worker surplus or deficiency from arising. The trade guilds, thus, effectively control numbers, and the quality of the training, by maintaining the system. This seems to be the most honest and effective apprenticeship program devised.

3. In the matter of the appropriateness and diversity of schools:

The German educational system is a very complex and convoluted one, but this complexity is perceived by the Germans as its main strength. In the academic areas the school system is firm and paternal, and in the vocational areas, this also seems to be the rule. Once a student is enrolled in the school, he is instructed in a program which seems neither to admit nor require any "option" choices.

The students, to a man, feel that the school training is as good as it can possibly be, given the facilities available which, unfortunately, vary from school to school, but which are also as high or higher in equipment standards, plant

facilities and material stocks as any schools in Alberta.

The one recurrent theme, underscored by a frightening number of people here involved was that while the facilities are first-rate, the teaching sometimes falls a bit short. The fairest reasons for this seem to lie in the fact that the teachers are either purely academic, and lacking in the technical skills; or that the teachers, who are experts in their areas, have been too long in the classroom situation and are out of touch with the reality of the trade or business as it is now practiced. The German economy is a booming, competitive one and even as little as three years away from the shop seems to produce an inability to see the newest techniques or processes.

C. In the matter of suitability for and adaptation to a trade or vocation:

Here opinions were unanimous that often mistakes are made in the selection of a line of work, that the student finds himself fully trained but either unsuited for or disinterested in his area. The problem of re-training is occasionally well-handled, but the financial aspect becomes insurmountable in most cases. One respondant states that this was the reason for the relatively high incidence of alcoholism in Germany, people unhappy in their work. Another man, himself faced with the situation and in his late twenties at the time, found giving up his trade easier than re-training. He secured a position in the commercial world as a traveller for a tobacco company.

D. In the matter of becoming established once schooling and training are completed:

This concern was also universal. The system dictates that "people trained equal people needed". This ensures employment. All too often, however, once a person has achieved his

professional status he is forced, through economics, through family pressures, or through contractual obligations to work in the same business establishment where he apprenticed or trained. While a steady pay cheque is thus assured, the professional becomes an employee which many find to be less than desirous. The costs of establishing one's own business are very restrictive, and in most cases impossible until a lengthy period of awkward servitude is endured.

Some general observations about the total system are perhaps now valid. The vast majority of Germans feel quite strongly that a university education (in the academic areas) is fine, but fairly useless. As one man put it, "We need workers. Not everyone can afford to think." Among the young people, a strong desire exists to get on with the business of living and becoming a part of the society. Whether the German system grows out of such thinking or causes such thinking remains the main mooting point. The system is tailored, though, to serve these people. Perhaps the harsh (by Alberta standards) streaming of children after the fourth grade prepares these students for the reality of a non-academic life.

Throughout this study I perceived that the system was as efficient and responsive to the needs of the community as any I could imagine. The products of the system tended to feel that while it was too restrictive, it was not easily improved or replaced. Again, to a man, they felt that the current move to the institution of what would be considered comprehensive schools was simply a waste of everyone's time and energy.

In short, I think this system of training people in a job-oriented, market-steered manner is very effective, It it has flaws then they are flaws of stiffness. Certainly the products of this system are competent beyond my expectations.

Visit to INA (Ball-Bearing) Factory in Lahr, W. Germany by Frank and Ruth Flanagan.

We visited the above factory in Lahr in order to see trainees at work. This factory employs 1200 people in the highly-skilled precision manufacturing for use in industries throughout Europe. There are 70 trainees in this factory; 85% of the trainees are graduates from the Hauptschule (age 15) and 15% are graduates of Realschule or other higher schools. All of the graduates of the program are offered permanent positions in the factory. Twenty-five, from approximately seventy-five applicants, are accepted in the first year. The interest of industry being involved at very considerable expense in the training of trainees became understandable at the end of this visit. The making of ball bearings is such a scientific and precise skill, this industry wishes to train all its tradesmen from a very early age. Industry seems motivated from self-interest. It remains difficult for an Albertan to understand paying the equivalent of 400-500 dollars a month to fifteen or sixteen year olds while they are learning a trade and continuing some regular schooling.

The special feature of this factory is the "vocational education" component which normally would be assigned to the school system. We observed two classes in session involved in the academic theory applicable to the special knowledge needs of this industry. The practical training we observed is conducted in a separate building completely equipped with the very latest machines. Here, trainees were practicing skills under the watchful eye and hand of four trainers and a supervising chief trainer. There is practically no product of any commercial use produced in this training center. One might suspect that in the interest of covering operating costs some projects that were salable would be selected. But we found that a very definite

curriculum of practical exercises was followed, coupled with a detailed evaluation system.

In the second and third year of the program, the trainees get some practical learning experiences in the factory, but the major object is to acquaint them with information they require to understand the theory and practice associated with the special skills that they have been learning. In this factory, technicians were trained in five separate metal trades. A trainee would become qualified in only one. In the last six months of their 3½ years of training they review, in a more or less classroom setting and lab, their three years of study in preparation for a final evaluation.

The trainees attend regular school for 1½ days per week, covering subjects in general education for citizenship. Ideally this education, as well, supports and rounds out their technical training. A typical day in the factory begins at 7 a.m., with a 20 minute breakfast break in the morning, one hour at noon for lunch, and work and study until 4:30 p.m.

We also noted that of the 25 new trainees, five were girls. This was a first in this factory. We have observed similar trends in other trades which traditionally have been reserved for males. The factory manager was pleased with the girls' progress, and hoped that they would become supervisors in the plant. Most of the unskilled labourers in this plant were women and the manager looked forward to having women in supervisory posts, as the women were growing tired of strictly male supervision.

Vocational Training of Handicapped Individuals in Baden-Württemberg: an interview prepared by Alberta teacher, Del Hack.

As the major focus of this study has been vocational education in the Federal Republic of West Germany, this section will attempt to deal with the way in which the education and vocational training of the handicapped takes place in Baden-Württemberg.

In this Land, the basic education of the handicapped takes place in ten different schools. Each of these types of schools is specially designed to help the student reach the point where he has a good self-concept and is able to be an active member of the work force. Examples of these types of schools include those which reflect the differences between the deaf and hard-of-hearing and the sightless and those with impaired vision. Even in the area of the mentally handicapped, a distinction between the severity of retardation is made. Yet, the major goal of all of the institutions is to allow the student to become a productive member of society.

A visit and an interview were arranged at the school for the severely mentally retarded in Lahr. Herr Kopf, the director of the institution, was very co-operative in this study. A short explanation of the organization of the school will give the reader a general idea of how special education is handled. This school is designed for children whose I.Q. is below 60, the average I.Q. being between 48 and 52. Children's ages range from 3 to 18 years. Thus, their education is comprised of four major periods:

1. Basic: this deals with the very young children. It is basically a socialization time, during which time they also learn self-care, e.g. cleanliness.
2. Middle: this is the introduction of formal learning, including language and arithmetic.

3. Upper: this is again a formal style of education. It stresses those skills which will be needed for daily life, i.e. oral communication, reading skills, simple arithmetic.

4. Work: this is the most important stage. With the extensive use of machines and shop areas, the children are taught to work and develop skills which can be used in further training or industry.

Although these children are severely retarded, from this school they are able to progress in three possible ways:

1. from this school to a school for the mildly retarded, there to be trained as helpers in the various trades. These students are normally incapable of acquiring papers in the trade.
2. from this school to the Langenwinkel workshop. (Langenwinkel is a small village near Lahr, almost a suburb of Lahr.) Here, there are two possibilities. The students, who are able, receive more training, and go on to work in industry. Others remain at Langenwinkel for their work career, working in the workshop.
3. from this school, to a job, often a small, family-run business.

In the schools that specialize in working with the handicapped, there are three levels of training required:

1. Four years of university training with a specialty in working with a particular kind of handicap. These people conduct the test, do the counselling and teach.
2. Technical teachers: these are certified tradesmen with one and one-half years of university training in working with the handicapped. Their training also

including teaching methods courses.

3. Aides: they have one and one-half years of training in child care, the emphasis of this training being on the care of the handicapped.

With the use of all of these personnel, the ratio of pupil and adult is kept very low. The school being discussed had a ratio of 4:1 (4 pupils: 1 adult).

The goal of the education of the handicapped is to allow them to be able to contribute to society. In West Germany, this goal is made more realistic by the existence of a law which states that any employer (including government) who employs more than 60 people, must employ a minimum of 6% handicapped people. If the employer falls short of this number, he is obliged to pay DM100 (app. $70 Canadian) per person per month to a special fund, which is used for the training of the handicapped. An example of the use of these funds is the establishment of special schools for the occupational training of the handicapped, whereby they can attain certification in various trades. Other than monies going to the special schools, a company may opt to establish contracts with handicapped workshops, thus being exempt of a maximum of 60% of the DM100 monthly fee.

As can be seen by this legislation, industry is forced to absorb handicapped people into the work world. At present, the unemployment rate among handicapped is 10%.

Industry has readily accepted most types of handicaps. The one exception is in the field of mental retardation. Thus, there has been established a large system of workshops, which employ mentally handicapped people. These workshops operate as small factories, doing contract work for large industries. They train the workers and provide continuing employment for them. If

a particular person is able to move into industry, the workshop, along with the unemployment agency, will attempt to place him. From a discussion with Herr Dessecker, we found out that many of the people employed at the workshop can work in industry, but, because of social pressures, are unable to.

In West Germany, both by legislation and practice, the attempt to integrate the handicapped into both vocational training and actual occupations has been more successful than what has been seen in Canada. Industry is both co-operative and active in the process of integration.

My special thanks to Herr Kopf and Herr Dessecker and Mr. E. Zwick (who acted as translator) for their help in the preparation of this information.

GLOSSARY

Abitur: higher school (Gymnasium) certificate, which provides entitlement to university entrance.

Basic Law: West German constitution, an interim term until final peace treaties are signed with a unified Germany.

Bund: federal government

C.D.U.: Christian Democratic Union.

D.D.R.: German Democratic Republic (East Germany).

Fachhochschule: specialized college or university.

Gesamtschule: comprehensive school principally for Grades 5 to 10 (13), embracing all Hauptschule, Realschule and Gymnasium educational courses, as far as organization and content are concerned, and leading to the final certificate of these various educational courses.

Grundschule: communal school providing primary education for all children of school age from classes/grades 1-4.

Gymnasium: Grammar/High School providing general education from classes/grades 5 to 13 with the object of acquiring university entrance.

Hauptschule: main school providing education from classes/grades 5 to 9 or 10. Attendance is compulsory for students not at another form of continuous education.

KMK: German abbreviation for Standing Conference of Education Ministers.

Kultus: German term equivalent to our Department of Education.

Land: state, province.

Lander: plural of Land.

Realschule: Intermediate School providing secondary education for classes/grades 5 to 10, with the object of acquiring technical or some type of vocational school entrance.

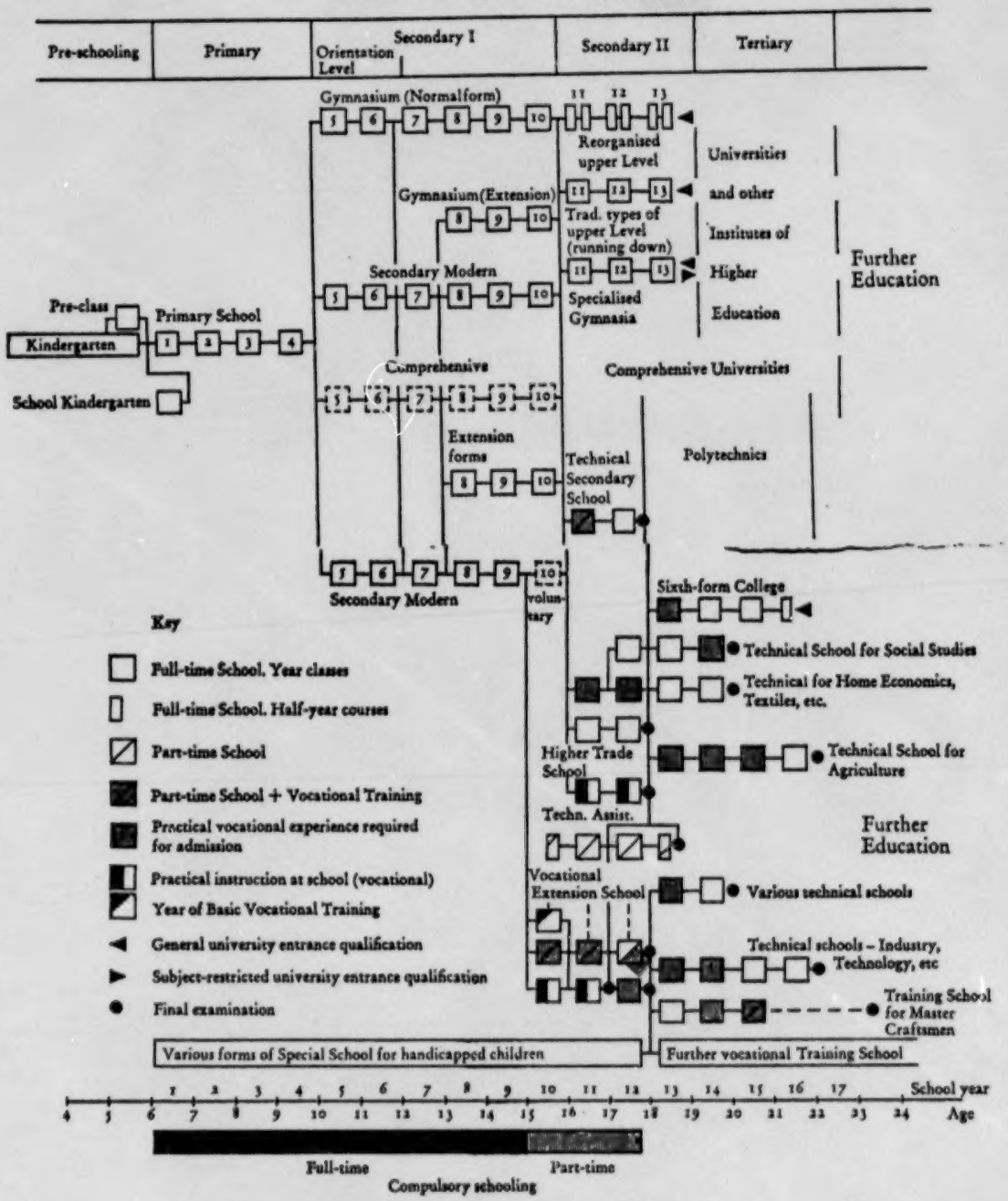
S.P.D.: Social Democratic Party of Germany.

Appendix 1: Map of West Germany, showing the various Länder

Länder *of the Federal Republic after 1949 (Saarland added in 1957)*

Appendix 2:

Educational Structure in the Federal Republic as of 1977



Source: Kultusministerkonferenz Handbook 1977

Appendix 3: Contents of Curriculums for Teacher Training by Selected Examples.

Teaching Careers at Vocational Schools

1. Mathematics
   I. Admission requirements:
      A. Participation in four introductory lecture courses (with tests) of one semester each; successful completion of three tests.
      B. Participation in a practicum at a computer center or in a lecture on the theory of probability.
      C. Successful participation in a seminar course.
   II. Examination requirements:
      A. Knowledge of differential and integral calculus, of linear algebra and of analytical geometry, based on the contents of the lecture courses in I.A, above.
      B. Knowledge, based on one-semester lecture courses, in algebra, in principles of geometry, in differential equations or in theory of functions (choice of course made by candidate).
      C. Extended proficiency in an area of pure or applied mathematics (by choice of candidate).
   III. Proctored tests:
      Five problems from different areas will be provided, three of which have to be answered. Alternatively, a choice will be offered between two essay topics. Time allowed is five hours.

2. Chemistry
   I. Admission requirements:
      A. Participation in introductory courses in general, in inorganic or in organic chemistry, with consideration of biochemical, physical and technological issues.
      B. Participation in an introductory course in general chemical commodity research.
      C. Successful participation in beginners' lab course in inorganic chemistry and organic chemistry as well as in a course on chemical experiments in schools.
      D. Successful participation in an advanced course each from two of the following areas: general chemistry, inorganic chemistry, organic chemistry, commodity research.
      E. Participation in a chemical-technological excursion.
   II. Examination requirements:
      A. Knowledge of fundamental facts in general, inorganic and organic chemistry; familiarity with the chemical structure, chemical propensities and conversion of significant substances and groups of materials.
      B. General insight into significant laws and theories in chemistry and into the areas of their application, into significant experimental procedures (methods) of chemical research as well as into significant technical processes and their chemical and physical principles.
      C. Survey of several commodities, including their scientific and industrial-economic aspects as well as their use.
      D. In-depth knowledge of two of the areas mentioned in I.D, above. Choice of areas rests with the applicant.
      E. Knowledge of important consequences of chemistry, their impact upon the environment, their relation to

biology, their technical application and their significance for ascertaining continued human existence.

III. Proctored tests:
Three different topics are offered for the choice of candidates. Time allowed: five hours.

3. Economics/Business Administration
I. Business Administration
A. Prerequisites: Successful participation in lectures and tests in appropriate preparatory subjects and in general business administration, as required during the segment of basic studies. In the segment of advanced studies the following certificates for successful completion of advanced tests have to be obtained: two certificates in special topics of business administration and one certificate in didactics of business administration or in one of the preparatory subjects.
B. Academic Standards:
1. Mastery of the subject matter in the preparatory subjects.
2. extended proficiency in general and special business administration (choice depending on those special areas sufficiently represented at the Pädagogosche Hochschule);
3. capability for analyzing problems of business administration.

II. Economics
A. Prerequisites: Successful participation in lectures and tests in economic theory, as required during the segment of basic studies; successful participation in a test for advanced students.
B. Academic Standards:
1. capacity to analyze economic problems;
2. mastery of characteristics of economic theories;
3. knowledge of principles of economic policy and public finance.

III. Law
A. Prerequisites: Successful participation in lectures and tests in civil law and commercial law, as required during the segment of basic studies. During the segment of advanced studies, a certificate of successful completion of a test or seminar has to be obtained.
B. Academic Standards:
1. mastery of the basic characteristics of civil, commercial, and trade law;
2. capability of analyzing legal problems.

Appendix 4: Samples of Schedules

Schedules for the two-year course at Commercial Schools (North Rhine-Westphalis)

Commercial School

	Lessons per week Lower	Upper
1. Religion	2	2
2. Business Studies	3	3
3. Business Mathematics	5	4
4. Book-keeping	3	2
5. Office management	-	3
6. German	5	4
7. English	5	4
8. Economic Geography	2	2
9. Civics and History	2	2
10. Shorthand	6	6
11. Typing		
12. Physical Training		
13. Home Economics	2	2
	35	34
14. Arts Studies	2	2
	37	36

Higher Commercial School

	Lower		Upper	
I. General Sphere				
Religion	2		2	
German	4		4	
History/Politics	2		2	
Sport	2	10	2	10
II. Specialisations				
Economics & Social Science	5		5	
Invoicing	2		2	
Economic Geography	1		2	
English	4		4	
French or Spanish	4		3	
Mathematics	4		3	
Natural Sciences	2		-	
Business Organisation	1		2	
Correspondence	2		2	
Shorthand	-	25	2	25
		35		35

Samples of Schedules....continued

Schedule for Technical School
(Schleswig-Holstein)

Subjects	Lessons per week			
	1	2	3	4
1. General studies				
1.1 Politics	2	2	2	2
1.2 German	4	4		
1.3 Vocational studies	2	2	2	2
	(8)	(8)	(4)	(4)
2. Specialisations				
2.1 Compulsory sphere				
2.1.1 Basic subjects				
2.1.1.1 English	3	3		
2.1.1.2 Mathematics	4	4		
2.1.1.3 Gen'l Business Management	3	3	5	5
2.1.1.4 Invoicing	4	4	4	4
2.1.1.5 Economics	4	4		
2.1.1.6 Industrial Law	4	4		
2.1.2 Applied Subjects				
2.1.2.1 Production	2			
2.1.2.2 Investment		2		
2.1.2.3 Financing			2	
2.1.2.4 Sales				2
2.1.2.5 Organisation			4	4
2.1.2.6 Data-Processing			3	3
2.1.2.7 Personnel			4	4
2.1.2.8 Tax			4	4
2.2 Options				
2.2.1 Statistics			(2)	(2)
2.2.2 Economic Geography			(2)	(2)
2.2.3 other possibilities			(2)	(2)
	(24)	(24)	(29)	(28)
(A) Qualifications in Business Management	32	32	32	32
3. Additional free choice For the Polytechnic qualification				
3.1 German			2	2
3.2 English	2	2	2	2
3.3 Mathematics			2	2
	(2)	(2)	(6)	(6)
(B) Qualification in Business Management + Polytechnic entrance	34	34	38	38

Appendex 5

V O C A T I O N A L E D U C A T I O N

in West Germany

a SUMMARY OUTLINE

written by

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Lahr, January 1981

Vocational Training in West Germany

1. Historical Development

In Germany there is a long tradition of vocational training. It has its origins in the crafts and commerce trades of the Middle Ages. By that time vocational education was carried out in an apprenticeship system, by which the apprentice became a journeyman with a master. The system was controlled and supervised by the vocational and professional organisations of the time, the guilds and corporations.

The Industrial Code of 1869 brought a series of minimum legal regulations like the possibility that the apprentice could be obliged to receive further education and the obligation for the employer to provide the necessary time for this. It also regulated the awarding of a certificate after completion of training.

In 1897 the Industrial Code was amended to extend the powers of the independent chambers of handicrafts and guilds in the field of vocational education. They took over the responsibility for the testing of the journeymen. The state authorities received the legal power to withdraw the rigth to train apprentices in the event of abuse. The amendment also introduced the principle that an apprentice could only be trained by a person at least 24 years old who had qualified as a journeyman. In 1908 a further amendment to the Industrial Code laid down that the training employer or the person responsible for the training of apprentices in a business must have qualified as a master. The same legal position applies to trades today.

Around 1900 industry started to train its own employees. Since 1925 we have had formal regulative measures, especially job descriptions for the training in different industrial trained occupations.

In 1930 the Chambers of Industry and Commerce took over the testing of skilled craftsmen in industry and commerce.

Parallel to the in-plant training, advanced vocational schools started to develop from about 1830 on. Originally they were run as weekend and evening schools and offered a number of general and special theoretical subjects to complete the practical training in the establishment. Since 1920 these schools are termed "vocational schools" and attendance was made compulsory by law in 1939.

The year 1969 brought the "Vocational Training Act" now in force. It established standard universal regulations for non-school vocational training in the various professional and economic fields. The federal Vocational Training Act regulates in detail:

... establishment of training, content and duration of the training contract, rights and obligations of trainee and employer, time off for the vocational training of the trainee, certificate and payment of allowances

... organisation of vocational training, personal and technical qualifications of instructors, their teaching qualifications, suitability of training premises, recognition of trainee occupations and regulation of the training course in these occupations and the training times, registering of training relationships

... interim and final examinations and supervision of vocational training, the rules for advanced vocational training, retraining and vocational training of the handicapped.

The Vocational Training Act also set up a Federal Institute for Vocational Training.

In 1976 an amendment was made to the Vocational Training Act by the Law on the Promotion of Training Places. It created a financial regulation for vocational training and amends the rules of organization for the Federal Institute for Vocational Training.

2. Present Vocational Training in Germany

Today vocational training in Germany is provided in establishments engaged in economic activity, in comparable institutions not engaged in economic activity like the public service and also in full-time vocational schools.

2.1. Vocational Education in the "Dual System"

In Germany the Secondary School I provides a general education. First steps are being made into a kind of of career education but are still in an experimental stage.

Most of the young people leaving secondary school I after nine years of full-time schooling go into in-plant vocational training. At the same time they have to attend a vocational school on a part-time basis.

This combined system is called the "Dual System" in Germany. The characteristic feature of this system

is the combination of the mainly practical training in a business or separate training establishment within a business and the predominantly theoretical instruction in the vocational school by subject as well as by time. The vocational school is a compulsory part-time school. It is attended on one or two days a week or in blocks of several weeks a year.

2.1.1. In-plant Vocational Training

The in-plant part of the dual vocational education is regulated by the "Vocational Training Act" of 1969. The act applies to vocational training in the various professional and economic fields such as:

... industry, trade and services
... craft trades
... agriculture
... public service
... domestic science
... liberal professions (coctors, dentists, solicitors, pharmacists, economic advisers)

The craft trades are regulated through a special section in the Vocational Training Act working a an amendment to the Crafts Code already enacted in 1953.

The purpose of vocational training under the Vocational Training Act should be "to provide, through a systematic programme, a broadly conceived basic preparation for an occupation and the necessary technical abilities and knowledge to engage in a skilled form of occupational activity. It shall also enable a trainee to acquire the necessary occupational experience." [1)]

---

1) Section 4, art. 1, Vocational Training Act, 1969

Before vocational training starts, a Vocational Training Contract must be concluded between the person providing the training (employer) and the trainee (apprentice). The training employer has to set down the essential stipulations of the contract in writing. The document must contain at least the

... nature, syllabus, timetable and purpose of the training and especially the form of occupational activity for which the training is to be provided;

... the commencement and duration of the training;

... any training programmes to be followed outside the training premises;

... the length of the normal daily hours of training;

... the length of the period of probation;

... the payment of remuneration and the rate to be applied

... the amount of leave

... the conditions in which notice may be given of termination of the contract

The apprentice has a legal right to appropriate remuneration. It is usually laid down in collective wage agreements and is, depending on the trade and year of training at the moment between DM 3oo,-- and DM 6oo,-- per months on average.

By end of 198o there were about 46o recognized trained occupations. But more than 5o % of all male trainees are found in only 15 trained occupations and 73 % of all female trainees stick to only 15 occupations.

Increasing mechanization and automation and especially growing specialization in production makes it difficult in particular for smaller businesses to fulfill the training requirements of the Vocational Training Act.

To meet the conditions chambers of industry and commerce, craft chambers or non-profit business associations have started to install supra-regional Centralized Training Establishments to which trainees are sent at the expense of the training employer for several weeks a year. These centralized training establishments supplement in-plant training. Their training is related to courses rather than to production which is usually the case, especially in smaller businesses and craft shops. Centralized training establishments are set up and maintained by the chambers, larger guilds and business associations. The setting-up is aided by state and federal money. in 1979 the federal government spent DM 162 million in subsidies to build neu Centralized Training Establishments.

Certain "Competent Bodies" are responsible for the supervision and the control of vocational education. In trade and industry these Competent Bodies are the Chambers of Industry and Commerce and in craft trades the Craft Chambers. There are 73 Chambers of Industry and Commerce, 43 Craft Chambers and about 17o Competent Bodies in other sectors such as in agriculture, the liberal professions and public administration.

The Competent Bodies supervise the provisions of training and provide encouragement through their advice to training employers and trainees through special appointed training advisers. The Competent Bodies have to keep a "List of Vocational Traineeships" under the Vocational Training Act. Any employer who is taking a person for vocational training is obliged by law to register the trainee. In order to register, a copy of the training contract has to be handed in and is checked by the competent body. Employers starting a vocational traineeship without the contract having been registered run the risk of losing the authority

to train and can be heavily fined.

The Competent Bodies are also responsible for the intermediate and final examinations and have to issue the rules to be observed with the examinations. Under the Vocational Training Act the Competent Bodies have to set up examination boards. These are joint bodies made up of an equal number of representatives of employers and employees and at least one vocational school teacher.

Generally an examination consists of a practical part (sample of work) and of a written part. In some states (Länder) the final examination comprises only the practical part. The written part is dropped and instead the examination board accepts the marks the trainee attained in the theoretical technical subjects in the final examination at the end of vocational schooling.

Depending on the occupation the success rate in final examinations is generally between 8o and 9o % during the past years.

The level attained is that of a skilled worker (industry), journeyman (crafts) and assistant (commercial).

2.1.2. The Vocational School
(Die Berufsschule)

The in-plant part of the dual vocational training is governed by the federal Vocational Training Act. The scholastic part is carried out in the vocational school and is governed by the education laws of the individual states, due to the federal constitution of West Germany.

The theoretical schooling consists of a part-time instruction of between eight and thirteen hours per

week. The schooling can also work in a block-release system with longer training periods of several weeks.

The vocational school has two functions:

1. It has to extend the general education of the trainees with special regard to their vocational training and
2. it has to supplement the practical in-plant training according to the respective occupation.

About 4o % of the instruction is general education and 6o % is technical in character.

According to vocational subjects the vocational schools are divided in industrial, commercial, domestic science, agricultural, and mixed vocational schools. Instruction is given in specialist classes for individual occupations or in vocational group classes, in which related occupations are combined.

For small professional fields (e.g. the sign making industry), in which there are only a few apprentices who would always be a minority in a vocational school, special vocational schools (e.g. the Federal German School for Sign Makers in Lahr) or special classes at vocational schools have been set up in recent years. These special schools or special vocational classes are mostly run on the state or even on the federal level. They work on a block-release system and mostly have their own boarding-facilities.

2.2. Vocational Education in Full-time Schools

2.2.1. Specialized Vocational Schools (Berufsfachschulen)

These schools are full-time schools involving attendance for at least one year. They can be divided into three

types:

1. those which train for an occupation, recognized under the Vocational Training Act and award an appropriate certificate

2. those which prepare future trainees in one of the recognized trained occupations. In this case, the time at school is normally credited to the following in-plant training

3. those training in occupations leading to an independent vocational certificate such as in child-care occupations

In 1978, 68.2 % of all students in full-time specialized vocational schools were girls, being predominantly trained in service occupations.

Some two-years specialized vocational schools award the so-called "technical school qualification", which is equal to the secondary modern school certificate.

2.2.2. The Basic Vocational Training Year (Berufsgrundbildungsjahr)

The basic vocational training year got introduced in 1974. It is planned to be e special fundamental vocational training year of today's three-year apprenticeship. The basic idea behind this is that a trainee should first get a broad basic vocational training not only in one occupation, but in a so-called "occupational field", embracing several different related occupations. The basic vocational training year then is followed by a specialist vocational training over a period of two years in the dual system in one of the trained occupations out of the chosen occupational field.

The basic vocational training year

1. gives the young trainee the chance to explore a a variety of different occupations and makes it easier the occupation that best matches personal abilities

2. increases the occupational flexibility of a person because of broad basic training in the first year.

The basic vocational training year can be run on a full-time school system or on the dual system.

2.2.3. The Vocational High School (Berufsaufbauschule)

It is attended by people, who

1. are taking part in a vocational training or

2. have already taken part in vocational education or have been employed in a certain occupation.

The Vocational High School provides a combination of general education and technical theory beyond the level of the normal vocational school. Successful completion leads to the technical school qualification equivalent to the Secondary Modern School Certificate. Vocational High Schools are divided into subject areas like general industrial, technical, commercial, domestic science, social teaching and agricultural subjects.

2.2.4. The Higher Technical School (Fachoberschule)

The Higher Technical School leads in two years to the qualification to enter a technical college. It requires an intermediate school education or an appropriate equivalent. The Higher Technical School provides a combination of general education, technical theory, practice and skills. In Germany there are Higher Technical Schools for industry, administration, engineering, domestic science, social studies and design.

2.2.5. The Technical School

(Fachschule für Technik - Technikerschule -)

The Technical School leads to an increased general and technical education. The level attained is that of a technologist. The Technical School trains specialist technical workers at intermediate level to be responsible to run a plant in their special field and to carry out senior staff duties within a limited area of responsibility. The prerequisite for entry into the Technical School is a complete vocational training in a certain occupation and at least two years practical experience as a journeyman or a skilled worker in the same or similar occupation. The courses are full-time, they last between one and two years and there is a certificate awarded that is equal to the Secondary Modern School Certificate. Technical Schools are in fields like textile and clothing industry, engineering, domestic science, agriculture, social teaching.

3. Personnel involved in Vocational Education

3.1. The teachers at vocational schools

In German vocational schools there are two groups of teachers:

1. scientifically-trained teachers
2. practical teachers

The training of a scientifically-trained teacher consists of

1. a scientific university study, lasting at least eight terms in the field the person is going to be teaching
2. one year practical training before or during university study
3. one and a half years preparatory service after completion of the university study in a vocational school. In this time the future vocational teacher gets special practical teacher-training on a scientific basis in cooperation with a teachers' college and under the supervision of an experienced confidential teacher at a vocational school.

The preparatory service ends with the Second State Examination and the teacher becomes a civil servant to the respective state government.

The practical teachers (shop teachers) give the practical instruction to impart vocational skills and carry through exercises and experiments.

The requirements to become a practical teacher are:

1. Secondary Modern School or equivalent education

2. Completion of a vocational education
3. Master craftsman certificate or certificate of a technical school
4. At least two years practice as a master craftsman
5. 18 months practical teacher-training combined with theoretical pedagogical instruction. The training concludes with a state examination giving the practical teacher the status of a civil servant.

4. The Financing of Vocational Education

1. The in-plant training is in principle completely financed by the employers themselves. The survey "Cost and Financing of In-plant Vocational Education, 1974", made for the federal parliament, calculated that the employers had spent an annual amount of DM 7.7 billion for vocational education in 1972.

2. The vocational schools are like all schools completely financed from public funds. The money comes from the state and the local authorities in the ratio of 7o % to 3o %. The federal government bears less than 1 % of the cost in the schools system (except the universities).

   The main proportion of the cost for the states is the staff costs, in particular the teachers' salaries.

   The local authorities (in case of vocational schools the regional administration districts) bear the material costs (school buildings, equipment, facilities, teaching materials) and also the cost of the secretarial and janitorial personnel.

Keferences:

1. Kommission der Europäischen Gemeinschaften, Informationsbericht "Berufliche Bildung", Beilage für die Bundesrepublik Deutschland, Luxemburg 1978

2. Der Bundesminister für Bildung und Wissenschaft, Berufsbildungsbericht 198o, Schriftenreihe, Berufliche Bildung 11, Bonn 198o

3. Die Zukunft der Berufsbildung, Deutscher Institutsverlag, Köln 1977

4. Bildungswesen im Vergleich, Nr. 5, Darstellung der beruflichen Bildungswesens in ausgewählten Ländern, Dokumentaion WEMA, Köln

5. Kosten und Finanzierung der außerschulischen beruflichen Bildung (Abschlußbericht), Bundestagsdrucksache 7/1811 vom 14.o3.1974

6. Der Bundesminister für Bildung und Wissenschaft, Grund- und Strukturdaten 198o/81, Bonn 198o

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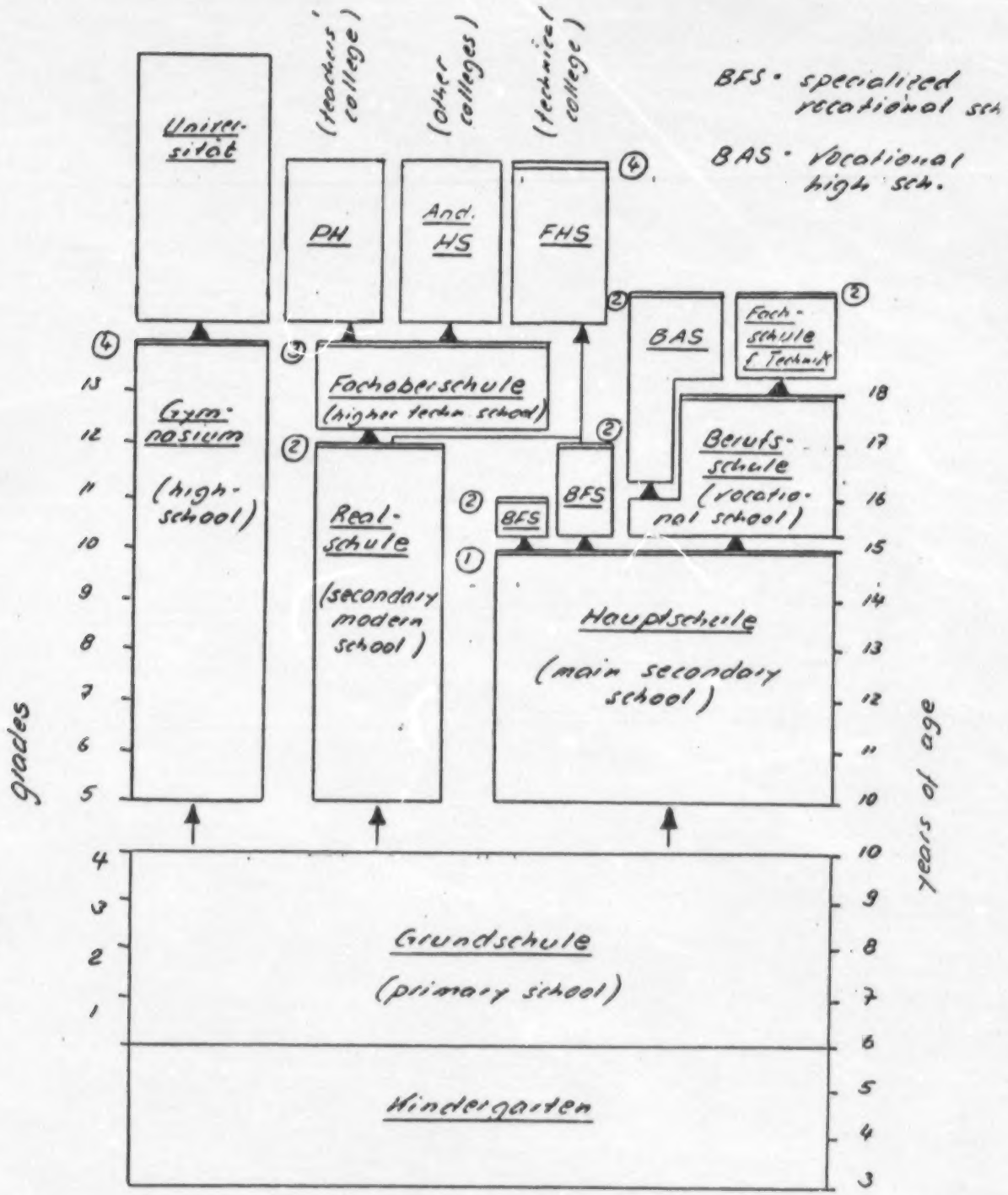
Breakdown of the Educational System in West-Germany



Leaving qualifications: ① secondary school certificate, ② intermediate certificate, ③ technical college entrance qualification, ④ university

Education and Vocational Training

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A) all schools / students (in million)

by categories

	1975	1979
total	13.159	12.977
primary	3.927	3.000
secondary I (modern, grammar)	5.231	5.442
secondary II	2.526	2.982
general (grammar schools)	0.474	0.579
vocational	2.050	2.403
others (incl. techn. schools)	0.641	0.588
tertiary (universities)	0.840	0.983

B) students / trainees (in vocational training)

total secondary II (vocational)	2.261	2.584 — 100 %
vocational schools (trainees in dual system)	1.607	1.821 — 70,5 %
other vocational schools (full-time schools)		
basic voc. training year	0.030	0.101 — 3,9 %
voc. high schools	0.027	0.017 — 0,7 %
specialized voc. schools	0.269	0.339 — 13,1 %
higher technical schools	0.118	0.124 — 4,8 %
technical schools	0.211	0.181 — 7,0 %

source: Federal Ministry of Education and Science

Vocational training in the "dual-system"

Total number of training contracts on Dec. 31., 1978

- trainees by sector - (thousands)

year	total	trade + industry	craft trades	agriculture	public service	others
1975	1329	634	507	33	46	111
1980	1517	692	615	62	45	113
Percentage	100%	45,6	40,5	3,4	3,0	7,5

Source: Federal Minister of Education and Science, Annual Report on Vocational Education, 1980

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Trainees in the 15 most popular trained occupations (female)

Trained occupation	Sector	1979 Number	1979 percentage		1979 order	'73 order
Sales woman (1st grade)	IH	72408	11,6		1	1
Hair dresser	HW	69803	11,2		2	2
Food sales	HW	42057	6,8		3	12
Office sales	IH	39808	6,4		4	4
Industrial sales	IH	34566	5,6		5	3
Doctor's assistant	FB	33331	5,4		6	5
Retail sales (2nd grade	IH	24833	4,0	72,8%	7	9
Dentist's assistant	FB	23797	3,8		8	8
Bank clerk	IH	21758	3,5		9	6
Wholesale a. export sales	IH	19718	3,2		10	7
Office worker	IH	18489	3,0		11	10
Assistant in business and tax advisory occupations	FB	15373	2,5		12	13
Domestic science assist.	LW	13257	2,1		13	15
Lawyers a. notary's assistant	FB	12037	1,9		14	-
Hotel assistant	IH	11249	1,8		15	23

total number of all female trainees → 621615 (= 100%)

HW - craft trades
IH - trade a. industry
FB - liberal professions
LW - agriculture

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Trainees in the 15 most popular trained occupations (male)

Trained occupation	Sector	1979 Number	1979 percentage	1979 order	1973 order
Vehicle mechanic	HW	93947	9.2	1	1
Electrician	HW	54054	5,3	2	2
Fitter	IH	43699	4,3	3	3
Joiner, Carpenter	HW	39090	3,8	4	13
Painter and decorator	HW	37251	3,6	5	9
Bricklayer	HW	36874	3,6	6	11
Gas- and water fitter	HW	31998	3,1	7	10
Wholesale- and export salesman	IH	29030	2,8	8	5
Baker	HW	25544	2,5	9	28
Butcher	HW	23003	2,2	10	25
Tool maker	HW	22042	2,1	11	6
Industrial salesman	IH	22010	2,1	12	4
Mechanic	HW	20968	2,0	13	24
Works fitter	IH	20416	2,0	14	20
Bank clerk	IH	19962	1,9	15	7

50,5 %

total number of all male trainees → 1023004 (= 100 %)

HW = craft trades
IH = trade and industry

Source: Federal Minister of Education and Science,

Subjects taught in the trained occupation "fitter" at Industrial Vocational School in Lahr

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Subjects	hours/week	
1. General		
German language	1	
Social studies	1	
Economics	1	
Religion	1	4
2. Professional		
Practical Science (testing, rating)	2	
Mathematics	1.5	
Technical drawing	1.5	
Technical Science (technology, materials, working processes)	3	8
total		12

Subjects taught in the trained occupation "retail sales" at "Commercial Vocational School in Lahr

Subjects	hours/week	
1. General		
German language	1	
Social Studies	1	
Religion	1	3
2. Professional		
economics	2	
retail-sales business administration	1	
accounting	2	
Retail sales theory	1	
Electives (e.g. foreign language, typing, sports)	2	1o
total		13

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Breakdown of all public expenditure for education and science in 1979

federal government (mainly universities and science promotion)	6.177 million	(8.9 %)
states	5o.491 million	(72.9 %)
local authorities	12.557 million	(18.1 %)
total	69.225 million	

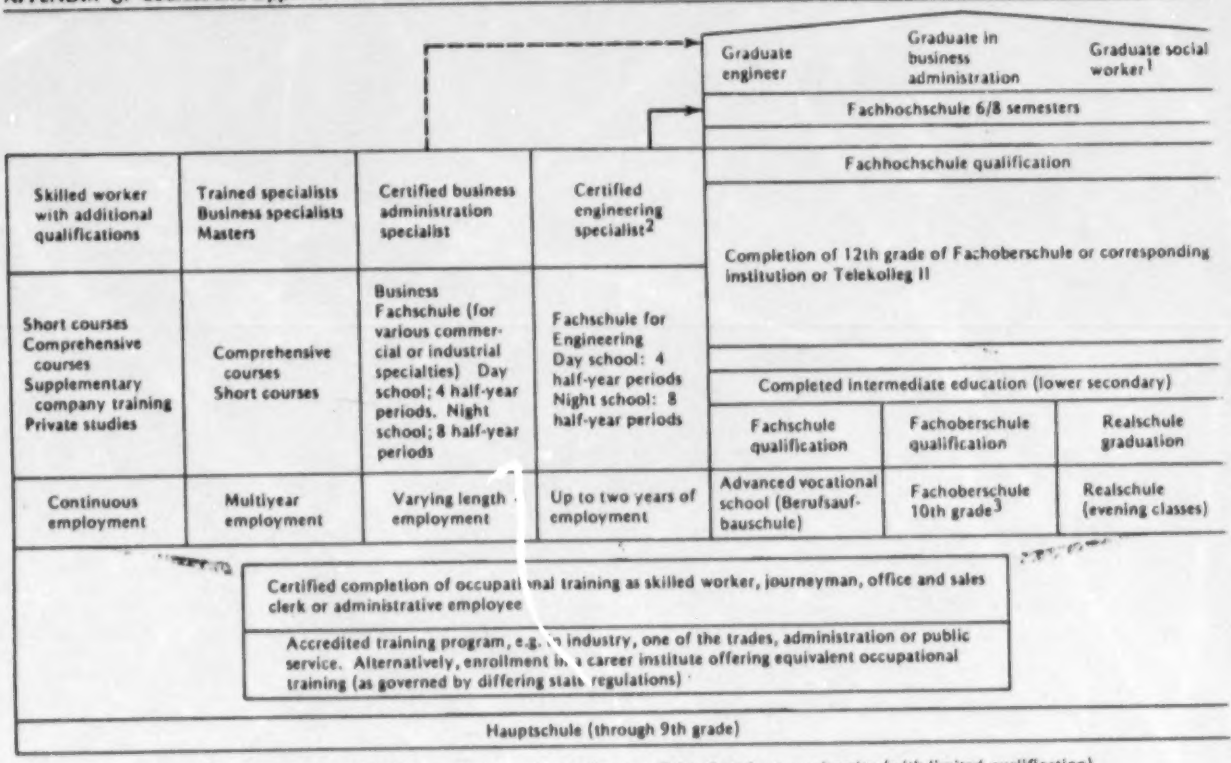
69.225 million = 1138,-- DM per capita

= 14.8 % of all public budgets

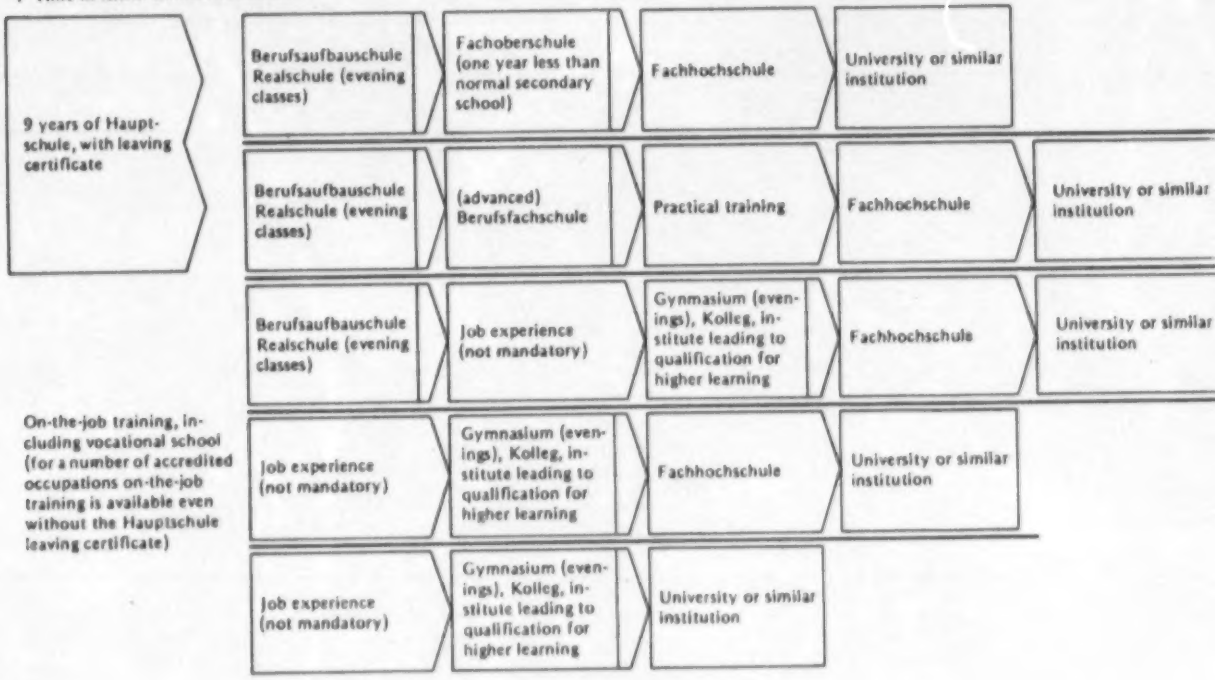
= 5 % of the Gross National Product

Source: Federal Minister of Education and Science, Basic and Structural Data 198o/81, pp 184-189

APPENDIX 6: Courses and Opportunities in Vocational Education and Training


Graduate engineer
Graduate in business administration
Graduate social worker[1]
Fachhochschule 6/8 semesters
Fachhochschule qualification
Skilled worker with additional qualifications
Trained specialists Business specialists Masters
Certified business administration specialist
Certified engineering specialist[2]
Completion of 12th grade of Fachoberschule or corresponding institution or Telekolleg II
Short courses Comprehensive courses Supplementary company training Private studies
Comprehensive courses Short courses
Business Fachschule (for various commercial or industrial specialties) Day school; 4 half-year periods. Night school; 8 half-year periods
Fachschule for Engineering Day school: 4 half-year periods Night school: 8 half-year periods
Completed intermediate education (lower secondary)
Fachschule qualification
Fachoberschule qualification
Realschule graduation
Continuous employment
Multiyear employment
Varying length employment
Up to two years of employment
Advanced vocational school (Berufsaufbauschule)
Fachoberschule 10th grade[3]
Realschule (evening classes)
Certified completion of occupational training as skilled worker, journeyman, office and sales clerk or administrative employee
Accredited training program, e.g., in industry, one of the trades, administration or public service. Alternatively, enrollment in a career institute offering equivalent occupational training (as governed by differing state regulations)
Hauptschule (through 9th grade)

1. Upon completion of the first division of studies, possible transfer to the same field of study at a university (with limited qualification).
2. Some states admit certified engineering specialists to study at Fachhochschulen, subject to certain requirements.
3. Only in North Rhine-Westphalia


9 years of Hauptschule, with leaving certificate
Berufsaufbauschule Realschule (evening classes)
Fachoberschule (one year less than normal secondary school)
Fachhochschule
University or similar institution
Berufsaufbauschule Realschule (evening classes)
(advanced) Berufsfachschule
Practical training
Fachhochschule
University or similar institution
Berufsaufbauschule Realschule (evening classes)
Job experience (not mandatory)
Gymnasium (evenings), Kolleg, institute leading to qualification for higher learning
Fachhochschule
University or similar institution
On-the-job training, including vocational school (for a number of accredited occupations on-the-job training is available even without the Hauptschule leaving certificate)
Job experience (not mandatory)
Gymnasium (evenings), Kolleg, institute leading to qualification for higher learning
Fachhochschule
University or similar institution
Job experience (not mandatory)
Gymnasium (evenings), Kolleg, institute leading to qualification for higher learning
University or similar institution

COMMENTARY: FRANK FLANAGAN

When Dr. Hawkesworth agreed to an official visit of the DND Overseas School System during May 1980, he requested to include in his itinerary some opportunity to learn something firsthand of the vocational education system of West Germany. Alberta, as a developing industrial society, was looking to models in vocational education which might better serve Alberta's needs and Alberta's young people in responding to those needs. A busy schedule was arranged for Dr. Hawkesworth, which included a birdseye view of vocational education in West Germany. This study is a follow-up of Dr Hawkesworth's interest.

West German educators are not boastful of all features of its total education system, but there is a sense of real pride and satisfaction with its vocational education system which touches 80% of German youth. As education is compulsory in West Germany until age 18, the vocational education system effectively prepares most German youth for a place in a highly organized society.

The DND school system employs 275 teachers to serve 3600 pupils in schools mainly in West Germany, but also in international schools in Belgium and Holland. Included in the teaching staff are eighteen teachers from Alberta. Unfortunately, of the Alberta group, no one is a vocational education teacher, but all are outstanding teachers. Dr. Hawkesworth requested that some Alberta teachers be included on the design of the study.

The outline of the study was decided by the Planning and Research department of Alberta education. The research for information was conducted by a team headed by Mr. U. Schweneke,

and the Alberta teachers involved monitored the information collected and followed up through interviews with a cross-section of people educated in the vocational education program--student, teacher, and technical and professional graduates.

As a participant in both teams, I attended four conferences on Germany Today, during which the overall education system was discussed in detail. I had an opportunity to discuss in detail the vocational education program with educators with many years of association with vocational education throughout West Germany. I visited schools and factories. My observations are included in the general information of the report. This is a concensus report, written by Ruth Flanagan and compiled from extensive notes and observations.

Throughout the study, the language barrier has proven to be more of a problem than anticipated. It has been difficult to find material published in English, and the cost of translation services is prohibitive. While German teachers and many students have some facility with English, it was often difficult for them to give specific or technical answers and say exactly what they wished to convey. It may be necessary to elaborate this report by verbal comments. As the budget has proven to be adequate, it may be possible to have Mr. Schweneke come out to Edmonton from Ontario, where he will be back in his Ministry position in February. It is suggested that a date in April, 1981, be considered. Mr. Schweneke would fly to Edmonton from Toronto.

As a summary statement, I would recommend to Alberta Education that the concept of the Dual System of Vocational Education in West Germany be researched in detail. Clearly,

throughout this study, it appears to be working satisfactorily. There was criticism from time to time of the school component. Some felt that the coordination of the total program was lacking in some trade areas. It was said that the theory taught by the schools was often not current with the advanced techniques in use in industry. It was said that the schools sometimes did not extend themselves into industry, but remained "aloof in their white collar position". There appeared to be a strong preference to "block" instruction in the schools, into six weeks or two month time slots when the students would attend full time instead of the few hours each week, which seemed to break up the continuity of instruction and practical experience. Most pupils interviewed felt that the civics component (language, history, economics) was of special benefit to them. This component comprised about 40% of the "in-school" time over the three year program. The money received by the trainee (student) was "inadequate" for those students with cars or smoking habits, but few were getting subsidies from home.

In the schools, one sensed an attitude of serious purpose in the student body, from trainees at age 15 to the master students at age 25. Parents generally counsel the child from age 12-14 to seek an opportunity as a trainee. It was interesting to hear students relate how contracts as trainees were sought. Several followed in the footsteps of their father or an uncle, or followed up on tips and contacts through friends and relatives. Of the average class of 30-35 pupils at age 15 who seek apprenticeship, 90-95% find a trade and complete a contract.

The principle of being trained by industry is completely

ingrained in the German psyche. Industry is expected to play this role in the education of the youth, and does so in its own interest. The numbers trained match the numbers required. An industry requiring more trainees lets the Labour Department know, and that information is fed as guidance to all schools. For example, there are a lot of automobiles in Germany and many "fender benders". The need for car paint sprayers is more than the number who would normally select such a career. One school visited had a full class of car painters as trainees, all of whom were introduced to the trade through career films supplied by the Labour Office for use in the schools.

The vocational education system in West Germany is a very comprehensive one. One highly experienced Principal stated that "few people really understand the advanced development of vocational education in West Germany." I learned to appreciate that statement. We spent an afternoon with a Vocational Education Counsellor from the Labour Office. The guidance program is very extensive and does place most students in career routes. The guidance program is very costly, and one wonders how much longer the German economy can bear the burden of deficits in millions of Deutschmarks annually.

The history of the development of the extensive vocational education program is told in some detail in Education in the Two Germanies, by Arthur Hearnden. In the Federal Republic, it was the furor over the alleged inability to meet manpower requirements that resulted in successive steps in the direction of central planning, in contrast to leaving education as

solely a Länder responsibility. It was argued that a long legacy of deprivation of opportunity had to be overcome and the ability of the German youth had to be put to use. Consequently, the whole emphasis was on extracting from each individual the maximum contribution to achievement of economic objectives. It was a general aim shared with East Germany, but in West Germany it was impossible for such a goal to be adopted in the same comprehensive sense as in the D.D.R. In the first place, the Länder carefully guarded their constitutional position as being responsible for education. The resistance to change was strong, but equally strong was a national concern that West Germany's leading position in the world economic field was being challenged and flexibility to adapt the educational system to rapidly changing demands of technological competence was of vital concern. The various aspects of school reform was the hottest political issue from 1965-70 in West Germany. The bridging of the gap between general and vocational education had become increasingly apparent.

In 1966, two separate drafts for a new law on vocational training were put forward by the political parties. This led to the Vocational Training Act of 1969. Vocational education had won a place of high importance alongside the traditional concept of education in Germany. The urgency of this recognition was underlined by an inquiry conducted in 1970, which revealed that two-fifths of industrial apprentices spent no time in an industrial workshop, and more than half had received no theoretical instruction within the firm.

As a result of the Vocational Act of 1969, the federal

authorities fulfilled the role of co-ordinator of Land policies through a number of specially constituted committees accorded the task of examining policy in a national context. A reluctance to infringe on the autonomy of the LÄnder prevails. In the Federal Republic, the lack of a central body to assist the entire development of vocational education inhibited the growth of a wholesale rationalization of this kind.

The Vocational Training Act aimed to correct one traditionally alleged abuse in the apprenticeship system, which was the failure of firms to ensure the competency of instruction. The law requires that instructors (trainers) be qualified personally and professionally. Industry was pressured to organize vocational training in the interest of the individual and of the country as a whole, and not merely the sole benefit of the individual firm. This dual system appears to be working in West Germany.

This study, as submitted, is not considered to be complete. It will likely raise many questions. If we can follow up with definitive answers, we will do so.